

nular mass, which however is sometimes absent. They stand on all sides of the tubes, both toward the axis and toward the periphery of the internode. I have found them in all the Orchidaceæ that I have examined, but never in stems which are not thickened, nor in the leaves*.

Finally, a few observations on the aërial roots of the Orchidaceæ. They seldom pass into the earth, even when this is placed in their way; they grow on long and freely in the air, nay sometimes in an upward direction. Only to the cracked bark of trees, to which the plants are attached, they adhere by means of fine hairs. Meyen observed that the outer layer of these roots is composed of spiral cells, and this layer is of tolerable thickness. This is succeeded by a rather lax parenchyma, but in the vicinity of the ligneous nucleus, as I will temporarily call it, scattered spiral cells occur again, their convolutions being more lax. The ligneous nucleus is composed, as in the roots of all Monocotyledons, of one or more circles of vascular bundles, in a parenchyma of narrow cells, which are narrower than in the rind, and therefore form no true pith. In the hairs a delicate spiral fibre is rolled up in close convolutions, but the base is expanded and devoid of spiral fibres, although spiral cells lie beneath. Moreover these hairs, like all radical hairs, have no transverse septa. The occurrence of abundance of spiral cells directly in these aërial roots, which very seldom descend into the earth, may contribute to the discovery of the at present enigmatical function of these cells, since they never absorb nor carry onward coloured fluids, like the spiral vessels.

VI.—*On the occurrence of Charadrius virginiacus, Borkh., at Malta.* By H. E. STRICKLAND, M.A., F.G.S.

I HARDLY know whether the occurrence of a new or unrecorded species of bird at Malta is to be regarded as forming an addition to the European fauna, because geographers are I believe not yet agreed as to whether Malta belongs to Europe or to Africa. But in either case the discovery of *Charadrius virginiacus* at Malta is not the less interesting, for this species has not as yet, I believe, been noticed in either of those two quarters of the globe to which that island is intermediate.

I have lately found an accidentally mislaid letter, addressed to me in 1846 by Capt. H. M. Drummond, 42nd R.H., whose valuable papers on the birds of Corfu, Crete, Macedonia, and

* Lindley remarked the existence of these tubercles in *Oncidium altissimum*, in his 'Introduction to Botany,' but gave no particular account of them.—A. H.

Tunis are well known to the readers of the 'Annals.' In this letter he mentions having procured at Malta "a little golden plover, which, on comparing with *C. pluvialis*, I find quite distinct, being only the size of *C. morinellus*, and much longer in the tarsus. It was shot in company with another of the same species in March 1845. They are occasionally observed in Malta every second or third year, generally early in spring, and have never been noticed in company with *C. pluvialis*, but generally solitary or in pairs. They have not been observed with black on the breast. The man who shot it informs me that he has frequently killed them, and that he can immediately recognise them by the note, which is peculiar, differing from that of *C. pluvialis*, and more resembling that of *C. hiaticula*."

Capt. Drummond has subsequently been in England, and showed a specimen of this bird to Mr. Yarrell, who ascertained it to be the *Charadrius virginiacus*.

This species possesses a far more extensive geographical distribution than the better-known *Charadrius pluvialis*. The latter occurs throughout Europe, and is recorded as far east as Trebizond and Siberia. But *C. virginiacus* not only frequents the whole of North and South America, but extends over the Polynesian Islands to the Malay Archipelago and India, as well as to Australia and New Zealand*. We have now evidence of its visiting Malta for a short time early in spring, a fact which clearly proves that it must winter in Africa, and, occasionally at least, pass the summer in some part of Europe, though it has never yet been obtained in either of these continents. This has probably been owing to the resemblance of its plumage to that of *C. pluvialis*, which bird is recorded by Malherbe in his 'Faune Ornithologique de la Sicile,' by Schembri in his 'Catalogo Ornitologico del Gruppo di Malta,' and by Von der Mühle in his 'Beiträge zur Ornithologie Griechenlands,' but without any indication of their having noticed the *C. virginiacus*.

The distinctions between *C. pluvialis* and *C. virginiacus* are numerous, and are carefully pointed out by Sir W. Jardine in his edition of 'Wilson's American Ornithology,' vol. ii. p. 362. It will therefore suffice to mention here that *C. virginiacus* is rather smaller than *C. pluvialis*, has rather longer tarsi, and has the under wing-covers and axillary feathers of a *gray brown*, while in *C. pluvialis* they are *pure white*.

* The Australian *C. xanthocheilus* of Jardine's 'Illustrations of Ornithology,' plate 85, and of Gould's 'Birds of Australia,' vol. vi. plate 13, is certainly identical with *C. virginiacus*. The true *C. xanthocheilus* of Wagler inhabits New Zealand (in company with *C. virginiacus*); and, according to Mr. Gray's Catalogue, there are three specimens of it in the British Museum from Van Diemen's Land, though it seems to be omitted by Mr. Gould.

American specimens of *C. virginicus* are somewhat larger than the Indian and Maltese ones. Both varieties however have been recently found by Capt. Drummond in Bermuda. In a list of the Birds of Bermuda by Mr. H. B. Tristram, which is on the point of being published by Sir W. Jardine in his 'Contributions to Ornithology,' these two varieties are regarded as distinct species, as appears from the following passage: "No. 46, *Charadrius marmoratus* [i. e. *virginicus*], American golden plover. No. 47, *Charadrius* ?, an unnamed species smaller than the American and perfectly distinct. Not unfrequent here. It has been also found in Malta by Capt. Drummond, 42nd R.H."

VII.—Notice of a new Genus of Cestoid Worm. By M. P. J. VAN BENEDEN*. Communicated by J. T. ARLIDGE, A.B., M.B., (Lond.).

THE researches of M. Beneden in the lower forms of animal existence have rightly secured him the reputation of an original, diligent, and careful observer; and every communication therefore from him deserves the attention of the naturalist. This leads us to give an abstract of his notice of a new genus of Cestoid Worms, and of a proposed amended arrangement of them.

M. Beneden discovered the new entozoon at the commencement of the spiral intestinal lamina of the skate, in company with other worms of the genus *Bothriocephalus*. Before entering on its description, he would premise that, as the *Cestoideæ* go through several phases of existence, a species is not represented by the adult state only, but by its several successive generations by gemmation, and of which the last only is furnished with sexual organs; and that it is consequently necessary to describe separately those various phases and to give them special names.

Thus the first stage of existence may be called the *scolexoid*, being that of the *scolex* or young worm on its escape from the ovum; the second, the *strobiloid*, from the word *strobilus* of M. Sars, designating the analogous stage of the *Medusæ*; the third and last, the *proglottoid*, from the term *proglottis*, applied by M. Dujardin to the separated joints of the *Cestoideæ*.

Owing to the striking peculiarities of the newly-discovered worm, M. Beneden has felt it necessary to constitute a new genus, of which it is at present the only example. This new genus is designated *Echinobothrium*, and presents the following characters:—

First, or *Scolexoid* generation, unknown.

* Extracted from vol. xvi. of the 'Bulletin de l'Académie Royale de Belgique.'